

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application.

Claims 1-15 and 21-22 are pending in the application. Claims 8 and 21 are independent and are amended. Claim 1 is amended and claim 22 is added. No new matter is involved.

Support for the amendments to claims 1, 8 and 21 is found throughout Applicant's Application as originally filed including, for example, the descriptions on page 11, lines 16-28, of the original specification.

Reconsideration of this application, as amended, is respectfully requested.

Personal Interview

Applicants acknowledge with appreciation the courtesies extended by Examiner Rude and Examiner Chowdhury to Mr. Robert J. Webster, their below-named representative, during the personal interview conducted with respect to this Application on March 21, 2006. During that interview, suggestions were made by Examiner Rude and Examiner Chowdhury concerning claim language that appears to make method claims 8 and 21 patentably define over the applied art, and concerning amending the device claims to be product-by-process claims. Applicants have amended method claims 8 and 21 in accordance with the Examiners' suggestions and have amended claim 1 to make it a product-by-process claim, in an attempt to overcome the outstanding rejections.

Drawings

In the absence of any objection to the drawings, Applicants respectfully submit that the drawings comply with U.S.P.T.O. requirements.

Claim Objections

Claim 1 is objected to for reciting intermediate steps of production. This objection is traversed as moot because claim 1 has been amended to recite a product-by-process invention, which is proper under settled patent law principles.

Claims 8 and 21 are objected to as being drawn to method step specificity (newly defined species) that does not have adequate support in the original disclosure. This objection is traversed because the Office Action fails to explain exactly what feature(s) of claims 1 and 8 are recited in the claims that are not found in the originally filed disclosure. Moreover, during the aforementioned interview, Examiner Rude agreed that claims 8 and 21, as amended, appear to have proper support in the originally filed Application.

Claim Rejections under 35 U.S.C. 102

Claims 1, 8 and 21 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent 6,078,365 to Ueda et al. (hereinafter, "Ueda"). This rejection is respectfully traversed.

Claims 1, 8 and 21 recite a combination of features which are not disclosed by Ueda.

Claims 8 and 21, as amended, positively recite a number of features, including forming and patterning a source electrode and a drain electrode over the first metal layer using a wet etch

process; and forming and patterning the first metal layer and the second semiconductor layer in a same pattern by dry-etching using the source and drain electrodes as a mask to expose the active layer between the source and drain electrodes such that the defined outer edge of the first metal layer is lined up with the defined outer edge of the second semiconductor layer to define a separation region and to reduce over-etching of the first metal layer, which are neither disclosed nor suggested by any of the applied art.

Claim 1, as amended, positively recites a liquid crystal display device made by the process of claim 8 and, as such, is not anticipated by Ueda for the reasons presented, above.

Accordingly, this rejection of claims 1, 8 and 21 is improper and should be withdrawn.

Claims 1-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' admitted prior art (APA) in view of U.S. Patent 6,078,365 to Ueda et al. (hereinafter, "Ueda"). This rejection is respectfully traversed.

In the first place, Applicants have not admitted that Figures 1-5 are prior art to them. In Fleming v. Giesa (BdPatApp&Int) 13 USPQ2d 1052 (7/17/1989) it was held that for an admission to be used against a party, it must be clear, unequivocal and unmistakable. See also, Harner et al. v. Barron et al., 215 USPQ 743 (Comr Pats 1981), Suh v. Hoefle (BdPatApp&Int) 23 USPQ2d 1321 (4/30/1991), Issidorides v. Ley (BdPatApp&Int) 4 USPQ2d 1854 (4/2/1985) and Ex parte The Successor In Interest Of Robert S. McGaughey (BdPatApp&Int) 6 USPQ2d 1334 (3/4/1988).

All that Applicants have done is to refer to Figs. 1-5 as "Conventional" art. Something can be conventional art in the sense that it is practiced in the real world at the time of Applicants'

filing of this Application and yet may not be prior art to Applicants in any sense, including, for example, under 35 U.S.C. §103, which forms the basis for this rejection. See, in this regard, the relatively recent amendments to 35 U.S.C. § 103(c).

Under the circumstances, i.e., where Applicants merely describe Figs. 1-5 as conventional art, the Office Action has not established that Applicants have made a clear, unequivocal and unmistakable admission on the record that what is disclosed in Figs. 1-5 is prior art to Applicants. In this regard, the Examiner is also advised that the initial burden to establish something as prior art is on the Office as part of its burden of making out a *prima facie* case of unpatentability.

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the Applicant to come forward to rebut such a case.

Applicants respectfully submit that the Office has not made out a *prima facie* case of unpatentability at least because it has not made out a *prima facie* case that Figs. 1-5 are prior art to Applicants.

In reply to this argument, the Office Action speculates that inclusion of a discussion of Figs. 1-5 as conventional art in the Background of the Invention portion of the Specification is consistent with the requirement of MPEP §608.01(c)(2) to disclose prior art. The Office Action also references MPEP §707.05(b) which states that MPEP §609 sets forth guidelines for

submitting prior art for consideration by the USPTO and speculates even further that Applicants' arguments might be improper.

Applicants respectfully disagree with these rebuttal arguments for the following reasons:

In the first place, MPEP §608.01(c) clearly states that the background of the invention includes paragraphs "describing . . . the state of the prior art or to other information disclosed known to the applicant . . ." (emphasis added). Clearly, this section of the MPEP readily distinguishes between "prior art" and "other information." Accordingly, MPEP §608.01(c) cannot logically be used as a basis for concluding that "conventional art" discussed in the Background of the Invention portion of the specification is prior art just because it is described as such in that portion of the specification. By the express terms of MPEP §608.01(c), "conventional art" disclosed in the background of the invention logically can be "other information," i.e., not prior art.

In the second place, the references to MPEP §707.05(b) and §609, which discuss information disclosure statements, are clearly misplaced. Applicants have not listed Figs. 1-5 of this Application on an Information Disclosure Statement. Furthermore, MPEP §609 clearly states that ". . . the filing of an information disclosure statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 CFR 1.56(b). 37 CFR 1.97(h). See MPEP §2129 regarding admissions by Applicant." MPEP 2129 clearly points out that listing of a reference in an IDS is not taken as an admission that the reference is prior art against the claims. In this regard, also

see Abbott Laboratories v. Baxter Pharmaceutical Products Inc., 67 USPQ2d 1191 (CAFC 2003).

MPEP 2129 also points out that only where the specification identifies work done by another as “prior art” is it treated as admitted prior art. In this case, Applicants have neither stated that the “conventional art” is “by another” or that it is “prior art.” Thus, the only basis on which the MPEP permits one to treat art disclosed in the specification as prior art does not apply to the situation present in this Application.

In the third place, Applicants respectfully submit that they have not done anything improper, the possibility of which is alleged on page 13 of the Office Action. Applicants are arguing that a statement in the specification by Applicants that something is “conventional art” is not, in and of itself, a clear, unmistakable and unequivocal admission that what is “conventional art” is “prior art,” and that the Office Action’s conclusion to the contrary is not supported by the sections of the MPEP cited to support that contrary conclusion. In fact, under the circumstances, it is only the Office Action’s rejection that is improper in the sense that it improperly treats Applicants Figs. 1-5 and its corresponding description, as admitted prior art to Applicants.

Moreover, claim 1, as amended, positively recites a combination of features, including source and drain electrodes over the first metal layer, the source and drain electrodes adapted to be used to pattern by etching the semiconductor layers in the same pattern as the first metal layer to reduce over etching of the first metal layer and to define a first upper portion of the separation region that abuts the lined up outer edges of the first and second semiconductor layers, which are neither disclosed nor suggested by any of the applied art.

Furthermore, claim 8, as amended, positively recites a number of features, including patterning the first metal layer and the second semiconductor layer in a same pattern by etching using the source and drain electrodes as a mask to expose the active layer between the source and drain electrodes such that the defined outer edge of the first metal layer is lined up with the defined outer edge of the second semiconductor layer to define a separation region and to reduce over-etching of the first metal layer, which are neither disclosed nor suggested by any of the applied art.

Additionally, with respect to claim 1, Applicant respectfully submits that claim 1 positively recites structural features of the source and drain electrodes to define a first upper portion of the separation region that abuts the lined up outer edges of the first and second semiconductor layers.

It is respectfully submitted that the combinations of elements and steps recited in claims 1 and 8 are not disclosed or made obvious by the applied art of record including the alleged APA and Ueda et al.

The device claims positively recite structural features which are not found in the alleged admitted prior art or in Ueda. The method claims also recite features that are not disclosed by the alleged admitted prior art or Ueda.

Accordingly, even if it were proper to modify the alleged APA in view of Ueda, the resulting reference combination would not meet, or render obvious, the claimed invention.

The Office Action relies on Figs. 15A-15F of Ueda. However, during the aforementioned interview, Examiner Rude agreed that the features of amended claim 8 were not disclosed or suggested by Figs. 15A-15F of Ueda.

Because neither reference discloses a number of claimed features, as indicated above, they do not render obvious the invention recited in claims 1-15.

Furthermore, Applicants respectfully submit that the Office Action does not make out a *prima facie* case of proper motivation to modify the alleged APA in view of Ueda. In other words, the Office Action fails to provide any objective evidence of proper motivation to modify Figs. 1-5, which have not been established to be prior art to Applicants, in view of the secondary reference to Ueda.

In rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital

Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Ueda is directed to preventing peeling of a metal mask (col. 2, lines 30-38). However, the “conventional” art disclosed by Applicants is not disclosed as exhibiting that problem.

As stated by the CCPA in the case of In re Sponnoble, 56 CCPA 823, 405 F.2d 578, 866 O.G. 341, 160 USPQ 237, 243,

“* * * a patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the 'subject matter as a whole' which should always be considered in determining the obviousness of an invention under 35 U.S.C. 103.”

Moreover, just because the references are from the same field of endeavor does not provide proper motivation to modify one in view of the other. A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225,

1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999). In other words, the broad conclusory statement that “ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation” to modify the alleged APA in view of Ueda is not clear and particular enough to constitute evidence of proper motivation.

Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness of the claimed invention.

The Office Action allegedly addresses the following detailed argument presented on pages 11-13 of the Amendments filed July 29, 2004 and September 9, 2005:

Ueda is directed to preventing peeling of a metal mask (col. 2, lines 30-38. However, the “conventional” art disclosed by Applicants is not disclosed as does not exhibiting that problem. Moreover, just because the references are from the same field of endeavor does not provide proper motivation to modify one in view of the other. A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999). In other words, the broad conclusory statement that “ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation” to modify the alleged APA in view of Ueda is not clear and particular enough to constitute evidence of proper motivation.

The Office Action does not address Applicant’s argument that the allegedly admitted prior art does not disclose any problem with the prior art that Applicant recognized and used as the basis for modifying the prior art. This failure to address the fact that the allegedly admitted prior art is oblivious to the need to be modified is evidence of improper hindsight reconstruction

of Applicant's invention based solely on Applicant's recognition of a problem in the conventional art.

As such, this rejection is improper and should be withdrawn.

The Office Action also states, on page 7, that a reason to modify the LCD of the APA "with added source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer define first upper portion of the separation region, and the source and drain electrodes include a second and third metal layer in order to use a low resistance metal such as Aluminum for improved conductivity of the circuit components."

Applicants respectfully submit that the Office Action has not established by factual objective evidence that the alleged APA needs to improve the conductivity of its circuit components – the alleged existence of such a need is pure speculation. As is well settled, a rejection based on Section 103 must rest on a factual basis, with the facts being interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, the Examiner has the initial duty of supplying the factual basis for the rejection he advances. He may not, because he doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. See, In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Additionally, neither the allegedly APA nor Ueda discloses the aforementioned source and drain electrode masking features of claims 1 and 8.

Accordingly, claims 1 and 8 are not rendered obvious by the applied art.

Applicants also note that the outstanding Office Action fails to respond to Applicants' detailed arguments, set forth above, and in the Amendment filed on September 9, 2005, that the Office Action has not made out a prima facie case that Figs. 1-4 are prior art to Applicants, thereby failing to comply with the explicit requirement to answer all of Applicants' arguments, per MPEP §707.07(f).

In view of the forgoing, it is respectfully submitted that the applied prior art of record, including the alleged APA and Ueda et al. fail to teach or suggest the combination of elements and steps set forth in claims 1 and 8. It is believed that claims 1 and 8 are allowable. Because the remaining claims depend from these allowable independent claims, they are also allowable for at least the above reasons, as well as for the additional limitations provided thereby. Thus, claims 1-15 are allowable and reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Additional Cited References

Because the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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